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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/483,816 | 01/15/2000 | Andrzej Partyka | A. Partyka-17 | 8898 |

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| EXAMINER |
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LAM, DANIEL K

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 2667 | 7 |

DATE MAILED: 04/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/483,816

Applicant(s)

PARTYKA, ANDRZEJ

Examiner

Daniel K Lam

Art Unit

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>2-6</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

On page 17, line 12, "me" is misspelled. It should be "may" instead.

On page 26, line 32, numeral 642 is not found in fig. 7.

Appropriate corrections are required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. **Claims 1, 4, 7 and 10** are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Pat. No. 5,414,731 issued to Antunes et al (hereafter Antunes).

Regarding **claims 1, 4, 7 and 10**, Antunes discloses the limitations of a network, a node, methods of operating the network and node for synchronization of frequency hopping control clocks in a wireless local area network, comprising radios (at least 3 nodes; claim 1) each having

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a transmitter, a receiver, and a hop table (claims 1, 4, 7, and 10). The hop table holds carrier frequency 21 (expected frequency; claims 1, 4, 7, and 10) and associated time duration 22 (expected time; claims 1, 4, 7, and 10) data for transmitting and receiving future transmission opportunities. See figures 1 and 3, col. 4, lines 8-9, and col. 5, lines 28-31.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 2, 5, 8, 11, 13, 14, 16-20, and 22-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Pat. No. 5,414,731 issued to Antunes et al (hereafter Antunes) in view of U. S. Pat. No. 5,079,768 issued to Flammer (an admitted prior art).

Regarding **claims 2, 5, 8, 11, 16, and 22**, although Antunes discloses the limitations in claims 1, 4, 7, 10, 13, and 19 discussed earlier, he does not disclose the transmission opportunities are at time intervals and frequencies that are determined according to at least one sequence that is unique to each node. Flammer discloses that each node is capable of determining and transmitting synchronization signal with each other, at selected time intervals, using pseudo random frequency hopping sequence that is unique to each node. See col. 5, lines 32-34, and lines 48-50.

Therefore, it would have been obvious to those having ordinary skill in the art, at the time of invention, to incorporate in each node a transmitter and a receiver such that the transmitter transmits timing opportunities according to a unique sequence and the receiver synchronizes to the unique sequence for a key motivation. Since a transmitter can only transmit less than 400

milliseconds of information in a single channel, by using pseudo-random pattern among different channels, the bandwidth between any pair of transceiver can be increased as taught by Flammer.

See col. 1, lines 46-57.

Regarding **claims 13, 17, 19 and 23**, Antunes discloses the limitations of a network, a node, and methods of operating the network and the node for synchronization of frequency hopping control clocks in a wireless local area network, comprising radios (at least 3 nodes; claim 13) each having a transmitter and a receiver (claims 13, 17, 19, and 23) for transmitting and receiving future transmission opportunities. See figure 1, and col. 4, lines 8-9.

However, Antunes does not disclose the limitations that the transmitter is capable of producing timing in the absence (claims 13 and 19) and independently (claims 17 and 23) of any information of other nodes timing, and the receiver has tracking mechanism for tracking timing for transmission (claims 13, 17, 19, and 23). But Flammer discloses using a temperature controlled stable oscillator TCXO 18 to provide transmitter timing in the absence and independently of any information from other nodes timing (see fig. 1, and col. 4, lines 32-34) and using a phase lock loop 20 and a mixer 28 in the receiver to track the timing (see fig. 1, and col. 4, lines 37-40).

Therefore, it would have been obvious to those having ordinary skill in the art, at the time of invention, to incorporate in each node a transmitter and a receiver so that the transmitter can transmit timing independently of others and the receiver can track the incoming timing for transmission for a key motivation. By having each node contains transceiver hardware that is capable of transmit and track timing, a practical peer-to-peer network where there is no global timing, can be setup without the disadvantage of master and slave configuration as taught by Flammer. See col. 2, lines 7-12.

Regarding **claims 14, 18, 20, and 24**, in addition to disclose the limitations in claims 13, 17, 19, and 23 discussed in the previous paragraph, Antunes et al further discloses a hop table

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holding frequency 21 (expected frequency) and duration 22 (expected time) data for tracking future transmission opportunities. See fig. 3, and col. 5, lines 28-31.

6. **Claims 3, 6, 9, 12, 15, and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Pat. No. 5,414,731 issued to Antunes et al (hereafter Antunes) in view of U. S. Pat. No. 5,079,768 issued to Flammer (an admitted prior art) in further view of U. S. Pat. No. 6,466,608 issued to Hong et al.

Regarding **claims 3, 6, 9, 12, 15, and 21**, although Antunes and Flammer disclose the limitations in claims 1, 4, 7, 10, 13, and 19 discussed in the previous paragraphs, they do not disclose the limitations that the transmitter transmits beacons at time intervals and frequencies that are determined by at least one sequence that is unique or individual to each node. Hong et al discloses a beacon period is included in the beginning of the hop period (see col. 4, lines 50-52) and the frequencies are switched according to either a random or predetermined sequence (see col. 3, lines 15-17).

Therefore, it would have been obvious to those having ordinary skill in the art, at the time of invention, to incorporate in each node a transmitter that can transmit a beacon and a receiver that can track the beacon for a key motivation. By having a beacon at the beginning of a hop period, it allows faster synchronization between the receiver and transmitter as taught by Hong et al. See col. 4, lines 52-53.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel K. Lam whose telephone number is (703) 305-8605. The examiner can normally be reached on Monday-Friday from 8:30 AM to 4:30 PM.

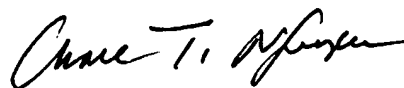
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If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (703) 305-4378. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status Information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DKL *dkl*
April 5, 2004



CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600